

Glyphosate Review

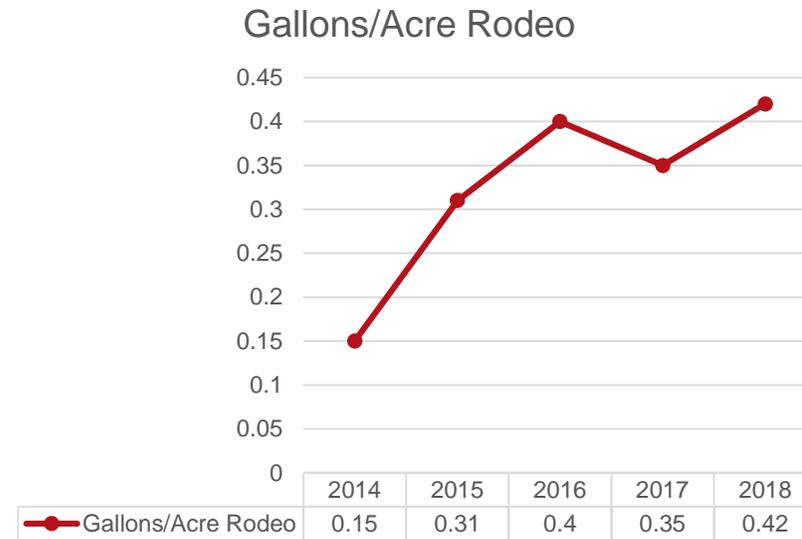
vermont electric power company



June 20, 2019
Operating Committee

Glyphosate – what is it?

- First US EPA approval in 1974
- Mostly widely used pesticide in the world – Round Up®
- Commonly used in Vermont
 - Agriculture
 - Terminating cover crops
 - Genetically altered crops such as corn and soybean
 - Landscaping
 - Utility Rights of Way - Rodeo®
 - VELCO
 - GMP
 - VEC
 - Railroads
 - VTRANS



Glyphosate – Why do we use it

- Low toxicity
 - Lower than table salt, Tylenol, caffeine, and nicotine
 - Labeled for use on crops
- Breaks down in the environment very quickly
 - Half life average of 60 days
 - Low toxicity to birds, mammals, fish, and invertebrates
- Bonds tightly to soil particles
 - Not likely to move to ground or surface water
- Efficacy
 - Very effective at controlling most of our incompatible species
 - Low rates - typically a pint to a quart per acre depending on incompatible density
- Low cost
 - Low use rates means we use less total gallons
 - Lower cost than alternative herbicides

Glyphosate – How do we use it?

- Selective Ultra Low Volume Foliar
 - Back pack application to only incompatible species on a 4 year cycle
- Selective Cut Stump Treatment – CST
 - Back pack application to freshly cut stumps
- Precautions taken to protect workers and environment
 - Trained licensed applicators
 - Trained in proper PPE – Long sleeves, long pants, rubber gloves due to other herbicides
 - Follow labeled directions
 - Permit obtained from Vermont Agency of Agriculture
 - Permit approved by Vermont Pesticide Advisory Council (VPAC)
 - Vermont Agency of Agriculture inspect crews on an annual basis
 - Low exposure as herbicide season is 6 to 8 weeks per year
 - Maintain required environmental buffers such as water supplies, surface waters, homes, etc.
 - VELCO foresters perform safety audits

Glyphosate – Recent Concerns

- Jury awarded a plaintiff \$289 M lawsuit
 - Plaintiff sued Monsanto for causing Cancer
- International Agency for Research on Cancer (IARC) classified as “probably carcinogenic”
- EPA conducted a re-evaluation and determined “not likely to be carcinogenic to humans at dose relevant for human health risk assessments”
 - EPA’s Assessment consistent with other countries including Canada, Australia, Germany, Japan
 - EPA included registration studies, published scientific literature
 - WHO only uses open scientific literature, therefore a subset of information is used

“Glyphosate is “not likely to be carcinogenic, EPA’s most favorable conclusion.”

“There is no risk to public health from the application of glyphosate.”

Alexandra Dunn, Assistant Administrator, Office of Chemical Safety & Pollution Control,
April 30, 2019



VELCO's Use - A Sustainability Review

- The use of herbicides as part of an Integrated Vegetation Management programs furthers the company's mission of a sustainable Vermont by:
 - People
 - Acknowledging the hazards of herbicides and requiring proper training, PPE, and permit compliance
 - Lower risk of injury to workers than other methods such as chainsaws and mowing machines
 - Performing safety inspections
 - Communicating with landowners, who ultimately have the authority to prohibit use
 - Financial
 - Least cost alternative, which results in a stable plant community and the reduction of future management work/costs
 - Company protected by contracts and insurance
 - Environment
 - Results in early successional habitat, which provides areas for rare plant species, song birds and other wildlife
 - Breaks down quickly with low toxicity to animals and insects

Next Steps & Resources

Next Steps

- Perform safety review of herbicide handling, application and overall usage
- Reassess company liabilities and risks
- Confirm adequate contracts and management practices
- Consult with NATF Vegetation Management Practice Groups

Resources

- Glyphosate: Farming, Health and the Environment Fact Sheet. Vermont Agency of Agriculture, 2019.
- Herbicide Migration Study, prepared for VELCO by TRC Environmental Corporation, 2010.